

## AMENDMENT TO THE CLAIMS

---

Wm  
Claim 1 (Previously amended): A recombinant *E. coli* host cell which is genetically modified for synthesis of a polyketide, wherein said modification comprises incorporation of a propionyl CoA carboxylase (*pcc*) expression system wherein said *pcc* expression system produces an enzyme capable of synthesizing 2S-methylmalonyl CoA, incorporation of at least one expression system for a modular polyketide synthase (PKS), and incorporation of at least one expression system for a phosphopantetheinyl transferase.

---

Claims 2-52 (Cancelled)

Claim 53 (Previously added): The host cell as in claim 1 wherein the *pcc* expression system comprises the *pccB* and *accA2* genes from *S. coelicolor*.

Claim 54 (Previously added): The host cell as in claim 53 wherein the host cell further comprises an expression system for biotin ligase.

---

D1  
Claim 55 (Currently amended): The host cell as in claim ~~1~~ 54 wherein the expression system for biotin ligase is the *birA* gene from *E. coli*.

---

Claim 56 (Previously added): The host cell as in claim 1 wherein the phosphopantetheinyl transferase expression system comprises the *sfp* gene from *Bacillus subtilis*.

Claim 57 (Cancelled)

---

D2  
Claim 58 (Currently amended): The host cell as in claim ~~57~~ 1 wherein the cell's *prpA-D* operon is disabled.

Claim 59 (Currently amended): The host cell as in claim 1 wherein the PKS is deoxyerythronolide B synthase (DEBS).

Claim 60 (Currently amended): The host cell of claim 1 wherein the polyketide is 6-deoxyerythronolide B (6-dEB).

Claim 61 (Currently amended): A recombinant *Streptomyces* host cell which is genetically modified for enhanced synthesis of a polyketide, wherein said modification comprises incorporation of an added matB gene from *Streptomyces coelicolor* or *Rhizobium trifoli*.

Claim 62 (Currently amended): The host cell as in claim 61 wherein modification includes incorporation of a matC gene from *Streptomyces coelicolor* or *Rhizobium trifoli*.

Claim 63 (Currently amended): The host cell as in claim 62 wherein the modification further comprises incorporation of a matA gene from *Rhizobium trifoli*.

---

Claim 64 (Previously added): The host cell as in claim 61 wherein said modification further comprises incorporation of at least one expression system for a modular polyketide synthase (PKS).

Claim 65 (Previously added): The host cell as in claim 61 wherein the host cell is *Streptomyces coelicolor*.

---

Claim 66 (Currently amended): The host cell as in claim 61 wherein the *mat* genes is from *Rhizobium trifoli*.


---

Claim 67 (Previously added): The host cell as in claim 61 wherein the PKS is DEBS.

Claim 68. (Previously added): The cell as in claim 61 wherein the polyketide is 6-dEB.

---

Claim 69 (Currently amended): A recombinant *E. coli* host cell which is genetically modified for synthesis of a polyketide,  
wherein said modification comprises  
incorporation of a *matB* gene from *Streptomyces coelicolor* or *Rhizobium trifoli*, and  
incorporation of at least one expression system for a modular polyketide synthase (PKS), and  
incorporation of at least one expression system for a phosphopantetheinyl transferase.

 Claim 70 (Currently amended): The host cell of claim 69  
wherein the modification further comprises incorporation of a *matC* gene from *Streptomyces coelicolor* or *Rhizobium trifoli*.

Claim 71 (Currently amended): The host cell as in claim 70  
wherein the modification further comprises incorporation of a *matA* gene from *Rhizobium trifoli*.

---

Claim 72 (Previously added): The host cell as in claim 69  
wherein the *mat* gene is from *Rhizobium trifoli*.

Claim 73 (Previously added): The host cell as in claim 69  
wherein the PKS is DEBS.

Claim 74 (Previously added): The host cell as in claim 69 wherein the polyketide is 6-dEB.

Claim 75 (Withdrawn)

Claim 76 (Withdrawn)

Claim 77 (Withdrawn)